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Volume 20 | Issue 3

Article 7

1958

Clinical Quiz

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Recommended Citation

Clark, John (1958) "Clinical Quiz," *Iowa State University Veterinarian*: Vol. 20 : Iss. 3 , Article 7.

Available at: https://lib.dr.iastate.edu/iowastate_veterinarian/vol20/iss3/7

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Clinical Quiz

History and symptoms are below. Make a diagnosis. Then turn the page for the correct diagnosis and the treatment.

John Clark, '58



Case History. A 7 year-old male Beagle cross was presented to the Stange Memorial Clinic with the following symptoms: periodic inappetence, weakness and progressive loss of weight for the past 3½ or 4 months. Enlargements in various areas of the body were noted (see figure 1) and the patient seemed to have some respiratory difficulty. A large mass could be palpated in the abdominal cavity. A blood determination was made and results found were as follows: Hb. 54% or 7.9Gm., R.B.C. 4,150,000, W.B.C. 15,000, eosinophils 300, stabs 2400, segments 10,700, monocytes 200, lymphocytes 2200, hematocrit 35mm., sed. rate 8 mm. in 1 hr.

Fig. 1. Seven-year-old male Beagle, showing enlargements in scapular and mandibular regions.

Diagnosis—next page.

Fig. 2. Post mortem findings.



Note enormous spleen, enlarged mesenteric lymph nodes and liver.

Diagnosis. Malignant lymphoma of the lymphoblastic type. Note the enlarged liver, enormous spleen and enlarged mesenteric lymph nodes in figure 2. Figure 3 shows the enlarged tonsillar tissue protruding into the pharyngeal region. This tissue was no doubt the cause of the marked respiratory difficulty. Also in figure 3, lateral to the mandible, can be seen the greatly enlarged mandibular lymph nodes.



Fig. 3. Grossly enlarged tonsillar tissue and mandibular lymph nodes.

Discussion. As can be seen from the photographs, generalized lymph node enlargement is the most striking feature of this disease. Malignant lymphoma is the most rapidly fatal of any neoplasm of the dog with a total course of 2-7 months. The etiology is unknown but several theories have been suggested. Monlux believes the etiology of this condition may be similar to the avian leucosis complex, that is, a viral agent with a hereditary predisposition. This supposition has not been proven experimentally. Other possible factors include chemical agents, endotoxins, and various other endogenous and exogenous factors.

Symptomatology includes enlargement of lymph nodes and lymph organs, inappetence, weakness, weight loss, respiratory embarrassment, anemia and terminal exhaustion. Structures containing lymph tissue are always involved. All or part of this type of tissue throughout the body may be affected. Neoplastic infiltration may be seen in the spleen, liver, kidneys, bone marrow, lungs, thyroid gland, parathyroid glands, intestines, stomach and gall bladder. This causes their normal histological structure to be altered. In addition to involving many or perhaps all of the lymphoid organs, any organ in the body may be invaded. However in the dog, involvement is more likely to be limited to the lymphoid and parenchymatous organs.

The terminology of this condition has

been a source of considerable confusion. The general terms malignant lymphoma or lymphosarcoma suffice for general use. Gall and Mallory use the term lymphosarcoma to imply the presence of primitive lymphoid cells reverting to a fibroblastic type. Others classify it according to the predominant cell type found, for example, the terms lymphoblastoma or lymphocytoma are used. These two cell types are the most common in the canine, the lymphoblastic being the predominant.

The terms aleukemic leukemia, subleukemic leukemia and leukemic leukemia have been used to indicate the presence or absence of neoplastic cells in the circulating blood. If daily W.B.C. determinations are made through the course of the disease, neoplastic cells will be found at times in the circulating blood stream. For this reason the unfortunate terms aleukemic leukemia, subleukemic leukemia and leukemic leukemia should not be used.

Treatment. The condition is invariably fatal and any treatment is palliative. The use of deep X-ray or injections of urethane or nitrogen mustard and appropriate supportive treatment will prolong life in some cases for a short period of time.

Summary. The most striking feature of malignant lymphoma is the generalized enlargement of lymph nodes and lymphoid organs. It is invariably fatal and only temporary prolongation of life can be achieved. The diagnosis is quite definite but the terminology used to describe it are both confusing and variable.

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